EPA Perspective on Bioreactor Landfill Systems

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Bioreactor Landfill Workshop
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Current Municipal Landfill Paradigm "Dry-Tomb Landfill"

- The existing landfill paradigm is to utilize a cover and liner system to minimize liquids in the landfill and leakage into the environment
- Prohibits the addition of liquid waste
- Leachate and gas condensate are allowed into the landfill if there is a composite liner in place
- Post-closure care period is for 30 years (+/-)

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Workshop Purpose

- Build on work already initiated with landfill groups
- Come to listen and learn from experts
- Have no pre-conceived notion on Bioreactors and strive to share information
- Better understand the merits and concerns of Bioreactor technology
- Assimilate information to develop RCRA strategy for optimizing waste management

EPA Landfill Projects

- **OSW** technical and regulatory activities
  - » RD&D; flexibility to promote new landfill technologies/innovations (Final rule-Summer 2003)
  - » Leachate Recirculation Rule; flexibility to allow liquid addition to other than composite liner (Proposed rule-Summer 2003)
- **OPEI**
  - » Project XL; compilation of bioreactor and recirculating projects
- **ORD**
  - » CRADA w/OSW and WM; project to establish bioreactor performance
  - » Alternate Cap Assessment Program; program to assess caps other than those specified in Subtitles C & D
- **OAR**
  - » LMOP
  - » Landfill Standards and Performance Rules

Issues

- Liquid Waste Addition/Recirculation
- Landfill Gas Emissions
- Monitoring
- Waste Stability
- Engineered Structures
- Head Requirement
- Cover System
- Post-Closure Care

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Action Items

- Form Internal Bioreactor Task Force Group (3/03)
- Publish Bioreactor Workshop (4/03)
- Finish Bioreactor Data Collection Effort (4/04)
  - » CRADA, XL, State Projects
- Finish Bioreactor Data Analysis (8/04)
- Develop Bioreactor Options (10/04)
  - » Regulation, Guidance, Additional Data